

In the Claims:

Claim 1 (currently amended) ~~Membrane~~ A membrane fuel cell delimited by bipolar plates comprising a cathodic compartment and an anodic compartment, said cathodic compartment comprising means for feeding air from the bottom to the top, said anodic compartment comprising means for feeding a hydrogen-containing fuel from the top to the bottom, at least one of said cathodic and anodic compartment comprising a flow distributor consisting of a porous material.

Claim 2 (original) The cell of claim 1 wherein said at least one compartment comprising a porous flow distributor is the cathodic compartment.

Claim 3 (currently amended) The cell of claim 1 ~~or 2~~ wherein said porous material is selected from the group consisting of three-dimensional reticulated materials, sintered materials, juxtaposed meshes, and juxtaposed expanded sheets.

Claim 4 (currently amended) The cell of ~~any one of the previous claims~~ claim 1 wherein said porous material has a porosity dimensioned for generating a gaseous flow pressure variation not higher than 0.5 bar.

Claim 5 (currently amended) The cell of ~~any one of the previous claims~~ ~~from claim 1 to 3~~ wherein said porous material has a porosity dimensioned for generating a gaseous flow pressure variation not higher than 0.1 bar.

Claim 6 (currently amended) The cell of ~~any one of the previous claims~~
claim 1 wherein said porous material has a void volume/total volume ratio not lower than
50%.

Claim 7 (currently amended) The cell of claim 6 ~~characterised in that~~
wherein said ratio is equal to or higher than 75%.

Claim 8 (currently amended) The cell of ~~any one of the previous claims~~
claim 1 comprising a heat extraction device crossed by liquid water in communication
with said cathodic compartment through calibrated holes on the relevant bipolar plate
delimiting the cell.

Claim 9 (currently amended) ~~Fuel~~ A fuel cell stack comprising a
multiplicity of cells of ~~the previous claims~~ claim 1.

Claim 10 (currently amended) ~~Method~~ A method for operating the cell of
~~any one of claims from~~ claim 1 ~~to 8~~ or the stack of claim 9 ~~wherein~~ comprising feeding
said cathodic compartment ~~is fed~~ with air in a dry state and at a pressure lower than 3
bar.

Claim 11 (original) The method of claim 10 wherein said pressure is lower
than 1.2 bar.

Claim 12 (currently amended) The method of claim 10 ~~or 11~~ wherein the temperature of the air discharged from the upper part of said cathodic compartment is ~~lower~~ less than or equal to the dew point defined by the ratio of moles of water of reaction/overall moles of discharged air and water ~~vapour~~ vapor.

Claim 13 (original) The method of claim 12 wherein the regulation of said temperature of discharged air is obtained by adjusting the temperature of a cooling fluid circulating inside the cell.

Claim 14 (original) The method of claim 13 wherein said cooling fluid is water injected in the lower part of the cell in the proximity of the air feed.

Claim 15 (original) The method of claim 14 wherein said water is injected in the lower part of the cell through calibrated holes present on the bipolar plate facing said cathodic compartment.

Claim 16 (original) The method of claim 15 wherein said calibrated holes are in communication with a heat extracting device whence said water injected in the lower part of the cell proceeds.

Claim 17(currently amended) The method of claim 16 wherein the flow-rate of the water flowing in said extracting device is substantially equivalent to the flow-rate if of said water injected through said calibrated holes.

Claim 18 (currently amended) The method of ~~any one of claims~~ claim 14 to 17 wherein the regulation of the flow-rate of said injected water is carried out as a function of the electrical current output.

Claim 19 (original) The method of claim 18 wherein said regulation is achieved by acting on the operating regime of an injection pump.

Claim 20 (currently amended) The method of ~~any one of claims~~ claim 14 to 17 wherein said injected water and said air feed have a constant flow corresponding to the value required for the maximum nominal electrical output.

Cancel **Claim 21**.